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Table 1: Modifications to the RBR Class for EDOS RBRs RTM Baseline 3/14/97

| DDD :4 | req_ke | req_catego | segment | req_type | s_verif_m | s_verif_sta | | a_verif_sta | text | interpretation | clarification |
|----------|--------|---------------------|---------|-------------|-----------|-------------|----------|-------------|-----------------|----------------|---------------|
| RBR_id | У | гу | | | ethod | ι | ethod | ι | | text | |
| EDOS- | | mission | FOS | performance | analysis | un- | analysis | un- | The EOC shall | | |
| 4.3.1.4# | 9184 | <u>essential</u> | CSMS | interface | | verified | | verified | provide the | | |
| В | | critical | | | | | | | capability to | | |
| | | | | | | | | | transfer | | |
| | | | | | | | | | Operations | | |
| | | | | | | | | | Management | | |
| | | | | | | | | | data to EDOS | | |
| | | | | | | | | | at a rate up to | | |
| | | | | | | | | | 49 kbps. | | |
| | | | | | | | | | 1 | | |

Table 2: Modifications to the RBR Class for AM-1 RBRs RTM Baseline 3/14/97

| RBR id | req_ke y | req_catego ry | segment | req_type | s_verif_m ethod | s_verif_sta t | a_verif_m ethod | a_verif_sta t | text | interpretation text | clarification |
|----------------|-------------|----------------------|----------|------------|--------------------|------------------|--------------------|------------------|--|------------------------|---------------|
| AM1- 0310#B | 9187 | mission essential | SDPS_FOS | procedural | inspectio n | un- verified | inspectio n | verified | The ECS contractor shall provide and the AM-1 spacecraft vendor shall receive training on operations of the FOS. | M&O will support | |
| AM1- 0315#B | 9188 | mission essential | SDPS_FOS | procedural | inspectio n | un- verified | inspectio n | un- verified | The ECS contractor shall provide and the AM-1 instrument teams shall | M&O will support | |

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| | | | | | | | | | receive training on operations of the IST toolkit. | | |
|----------------|------|----------------------|----------|------------|----------------|-----------------|----------------|-----------------|--|-------------------|--|
| AM1- 0320#B | 9190 | mission essential | SDPS_FOS | procedural | inspectio n | un- verified | inspectio n | un- verified | The AM-1 spacecraft vendor shall provide and the ECS contractor shall receive AM-1 spacecraft operations training. | M&O will support. | |
| AM1- 0330#B | 9191 | mission essential | SDPS_FOS | procedural | inspectio n | un- verified | inspectio n | un- verified | The AM-1 instrument teams shall provide and the ECS contractor shall receive AM-1 instrument operations training. | M&O will support. | |

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| RBR_id | req_key | req_catego ry | segment | req_type | s_verif_met hod | s_verif_stat | a_verif_m ethod | a_verif_ stat | text | interpretation text | clarification |
|---------------|---------|----------------------------------|---------------|-----------|--------------------|-----------------|--------------------|---------------------|--|------------------------|---------------|
| NI- 0110#B | 9192 | mission essential eritical | FOS CSMS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to communicate with the NCC via the EBnet interface. | | |
| NI- 0120#B | 9194 | mission essential eritical | FOS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to send TDRSS schedule requests to the NCC. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS. | | |
| NI- 0130#B | 9195 | mission essential critical | FOS | interface | demo | un- verified | demo | un- verifie d | ECS shall have the capability to receive schedule result messages from the NCC. These messages will be defined in the ICD | | |

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| | | | | | | | | | Between the GSFC MOCs and the NCCDS. | |
|---------------|------|----------------------------------|-----|-----------|------|-----------------|------|---------------------|---|--|
| NI- 0140#B | 9197 | mission essential eritical | FOS | interface | demo | un- verified | demo | un- verifie d | ECS shall have the capability to receive TDRSS schedule messages from the NCC. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS. | |
| NI- 0150#B | 9199 | mission essential critical | FOS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to send other non-telemetry data messages to the NCC, which includes at a minimum status and reconfiguratio n messages. These messages will be defined in the ICD Between the | |

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| | | | | | | | | | GSFC MOCs and the NCCDS. | |
|---------------|------|----------------------------------|-----|-----------|------|-----------------|------|---------------------|---|--|
| NI- 0160#B | 9200 | mission essential critical | FOS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to receive other non-telemetry data messages from the NCC, which includes at a minimum status and reconfiguratio n messages. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS. | |
| NI- 0170#B | 9201 | mission essential critical | FOS | interface | demo | un- verified | demo | un- verifie d | ECS shall have the capability to communicate with the NCC to coordinate support from GN, DSN, and WOTS for EOS missions. | |

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| | | | | | | | | | This interface is defined in the Operations Interface Procedures Between the Network Control Center (NCC) and the Spaceflight Tracking and Data Network Users. | |
|---------------------|------|----------------------------------|---------------|-----------|------|-----------------|------|---------------------|---|--|
| NI- 0310#B | 9203 | mission essential critical | FOS CSMS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to communicate with the FDF via the EBnet interface | |
| NI- 0340- b#B | 9205 | missione ssentiale ritical | FOS | interface | demo | un- verified | demo | un- verifie d | ECS shall have the capability to receive planning and scheduling information for the EOS spacecraft and instruments from the FDF (AM-1 mission-specific products). Mission-specific | |

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| | | | | | | | | | requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs. | |
|---------------|------|------------------|------|-----------|------|-----------------|------|---------------------|---|---|
| NI- 0360#B | 9208 | missionc ritical | SDPS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to send a notification of orbit or attitude quality checks and request updated (refined/repair ed) orbit or attitude data from the FDF when necessary. Missionspecific requirements for FDF support of EOS missions will be documented in | IRD needs to be modified to remove reference to "attitude". CCR 505-01-41-100, CH21 only addresses "orbit quality checks". IRD needs to be modified |

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| | | | | | | | | | the EOS mission-level Detailed Mission Requirements documents and FDF- developed ICDs. | |
|---------------|------|---------------------|------|-----------|------|-----------------|------|---------------------|---|--|
| NI- 0365#B | 9209 | missione ritical | | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to receive from FDF a notification of orbit or attitude quality checks. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs. | IRD needs to be changed to be consistent with CCR 505-01-41-100, CH21, i.e. reworded as follows: "ECS shall have the capability to receive from FDF orbit and attitude quality checking software and parameters. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements and FDF-developed ICDs. |
| NI- 0440#B | 9211 | missionc ritical | CSMS | interface | test | un- verified | test | un- verifie d | ECS shall have the | NOLAN no longer applies to ECS. The |

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| | | | | | | | | | capability to receive information regarding fault status and estimated time to repair or resolve NOLAN faults that may affect the quality of NOLAN services between ECS and its users. | NOLAN functions are now being performed via Ebnet. |
|---------------|------|---------------------|------|-----------|------|-----------------|------|---------------------|--|---|
| NI- 0450#B | 9212 | missionc ritical | CSMS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to receive periodic summary information about faults that may have affected the quality of NOLAN services between ECS and its users. | NOLAN no longer applies to ECS. The NOLAN functions are now being performed via Ebnet. |
| NI- 0470#B | 9215 | missione ritical | CSMS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to receive notifications of security breaches at NOLAN sites | NOLAN no longer applies to ECS. The NOLAN functions are now being performed via Ebnet. |

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| | | | | | | | | | or within the NOLAN network that could potentially affect ECS sites. | |
|---------------|------|--|-------------------------|-----------|----------|-----------------|----------|---------------------|---|--|
| NI- 0480#B | 9216 | missione ritical | CSMS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to send to NOLAN notifications of security breaches at ECS facilities that could affect NOLAN and other EOSDIS sites. | NOLAN no longer applies to ECS. The NOLAN functions are now being performed via Ebnet. |
| NI- 1000#B | 9217 | mission <u>e</u> ssentiale ritical | FOS SDPS CSMS | interface | analysis | un- verified | analysis | un- verifie d | ECS functions shall have an operational availability (computed as defined in the Functional and Performance Requirements Specification for the ECS) of 0.96 at a minimum and a Mean Down Time (MDT) | |

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| | | | | | | | | | of four (4) hours or less, unless otherwise specified. | |
|---------------|------|----------------------------------|-----|-----------|----------|-----------------|----------|---------------------|---|--|
| NI- 1030#B | 9219 | missione ssentiale ritical | FOS | interface | analysis | un- verified | analysis | un- verifie d | The ECS FOS shall have an operational availability of 0.99925 at a minimum and a MDT of five (5) minutes or less for noncritical real time functions. | |

Table 4: RBR to L4 Additions RTM Baseline 3/14/97

| RBR_ID | L4_ID |
|----------------|--------------------|
| EDOS-4.1.3.1#B | <u>S-INS-00580</u> |
| EDOS-4.1.3.1#B | <u>S-INS-00600</u> |

TABLE 5 : RBR to L4 Deletions RTM Baseline 3/14/97

| RBR_ID | L4_ID |
|----------------|-------------|
| EDOS-4.1.3.1#B | S-DPS-30910 |

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Table 6: Information Table: These changes have already been made in CCR # 97-0352A RTM Baseline 3/14/97

| RBR_id | req_key | req_catego ry | segment | req_type | s_verif_met hod | s_verif_stat | a_verif_m ethod | a_verif_ stat | text | interpretation text | clarification |
|---------------|---------|----------------------------------|---------|-----------|--------------------|-----------------|--------------------|---------------------|--|------------------------|---------------|
| NI- 0330#B | 9204 | mission essential critical | FOS | interface | test | un- verified | test | un- verifie d | ECS shall have the capability to send a subset of EOS spacecraft telemetry stream to the FDF, which includes the following: a. Attitude sensor data b. Navigation telemetry data c. Spacecraft maneuver telemetry data Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed | AM-1 mission only. | |

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